CANADA

National Energy Board

Reasons for Decision

Trans Mountain Pipe Line Company Ltd.

OHW-1-93

April 1994

Facilities

National Energy Board

Reasons for Decision

In the Matter of

Trans Mountain Pipe Line Company Ltd.

Application dated 29 October 1993
for Stage 2 Expansion Project

OHW-1-93

April 1994

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Abbreviations

Act	*National Energy Board Act*
AEC	Alberta Energy Company
AFUDC	allowance for funds used during construction
Amoco	Amoco Canada Petroleum Company Ltd.
ANS	crude oil production from the Alaska North Slope region of the United States
APMC	Alberta Petroleum Marketing Commission
Board or NEB	National Energy Board
b/d	barrels per day
B.C.	British Columbia
Canadian Heritage	Department of Canadian Heritage, Alberta Region
CAPP	Canadian Association of Petroleum Producers
CERA	Cambridge Energy Research Associates
CERI	Canadian Energy Research Institute
Chevron	Chevron Canada Limited
dB	decibel
dB(A)	weighted decibel
EARP GO	*Environmental Assessment Review Process Guidelines Order*
Eight Shippers	A group of companies comprised of Amoco Canada Petroleum Company Ltd., Gulf Canada Resources Limited, Husky Oil Limited, Imperial Oil Limited, Mobil Oil Canada, PanCanadian Petroleum Limited, Petro-Canada and Shell Canada Limited
EPP	Environmental Protection Plan
ERCB	(Alberta) Energy Resources Conservation Board
ERCB 94-B	Crude oil supply forecast published by the ERCB in January 1994 entitled "ERCB 94-B Alberta Oil Supply 1994 - 2005 Update"
Four Shippers	A group of companies comprised of Shell Canada Limited, Imperial Oil Limited, Chevron Canada Limited and Petro-Canada

Gibson	Gibson Petroleum Company Limited
Gulf	Gulf Canada Resources Limited
IPL	Interprovincial Pipe Line Inc.
JEEP	Jasper Energy Efficiency Program
JNP	Parks Canada, Jasper National Park
KerMor	KerMor Trading Company Ltd.
km	kilometre(s)
kW	kilowatt
kVa	kilovolt-ampere
m^3	cubic metre(s)
m^3/d	cubic metre(s) per day
NGL	Natural Gas Liquids
Norcen	Norcen Energy Resources Limited
NWT	Northwest Territories
PanCanadian	PanCanadian Petroleum Limited
PGS	Palisades Generating Station
PIRA	Petroleum Industry Research Associates
Prairies	Alberta, Saskatchewan and Manitoba
ROE	rate of return on common equity
Shell	Shell Oil Company
TMPL, Company or Applicant	Trans Mountain Pipe Line Company Ltd.
Texaco	Texaco Trading and Transportation Inc.
Tosco	Tosco Refining Co.
$US	United States dollars
WTI	West Texas Intermediate, a light sweet crude oil

Recital and Submittors

IN THE MATTER OF the *National Energy Board Act* ("the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application dated 29 October 1993 by Trans Mountain Pipe Line Company Ltd. for an order, pursuant to section 58 of the Act, requesting exemption from sections 30, 31, and 47 of the Act in respect of certain modifications and facilities proposed to be added to its pipeline system, known as the Stage 2 Expansion Project, filed with the Board under File 3400-T004-36; and

IN THE MATTER OF National Energy Board Directions on Procedure, Order OHW-1-93, as amended.

EXAMINED by means of written submissions.

BEFORE

J.G. Fredette	Presiding Member
A. Côté-Verhaaf	Member
R.L. Andrew	Member

SUBMITTORS

Alberta Petroleum Marketing Commission
Canadian Association of Petroleum Producers
Chevron Canada Limited
Gibson Petroleum Company Limited
Gulf Canada Limited
Imperial Oil Limited
Jasper Environmental Association
KerMor Trading Company Ltd.
Norcen Energy Resources Limited
Parks Canada (Canadian Heritage)
PanCanadian Petroleum Limited
Petro-Canada
Shell Canada Limited
Shell Oil Company
Texaco Trading and Transportation Inc.

Chapter 1

Application

Trans Mountain Pipe Line Company Ltd. ("TMPL", "the Company" or "the Applicant") filed an application dated 29 October 1993 with the National Energy Board ("NEB" or "the Board") pursuant to section 58 of the *National Energy Board Act* ("the Act") for an order to exempt the construction and modification of certain pipeline facilities from the provisions of sections 30, 31 and 47 of the Act. On 2 December 1993, the Board issued a letter indicating it had decided to conduct a written hearing on the application, and further issued Hearing Order OHW-1-93 dated 20 December 1993 setting out the associated Directions on Procedure.

TMPL owns and operates a pipeline for the transportation of oil from points of receipt in the Province of Alberta and the Province of British Columbia to points of delivery in the Province of British Columbia, principally refineries and marketing terminals in the Vancouver area. Other points of delivery are the Westridge marine terminal, which is located on tidewater at TMPL's western extremity, and a point of connection on the International Boundary with the pipeline system owned and operated by Trans Mountain Oil Pipe Line Corporation, a wholly owned subsidiary of TMPL capable of delivering Canadian petroleum to four refineries located in the State of Washington. The pipeline is utilized for regular deliveries of partially refined petroleum from Edmonton to Burnaby and refined petroleum from Edmonton to Kamloops and Burnaby.

The purpose of the expansion would be to increase the sustainable capacity on the TMPL pipeline system by approximately 6 000 m^3/d (37,700 b/d). The applied-for facilities are more fully described in Chapter 5 "Facilities".

In its application, TMPL proposed a rolled-in toll design treatment for the proposed expansion facilities. The cost of the expansion is estimated by TMPL to be approximately $27.4 million.

Chapter 2

Preliminary Matters

As a preliminary matter, the Board will address the issue raised in this hearing concerning the roles of Parks Canada, Jasper National Park ("JNP") as intervenor and subsequent determination of initiating department pursuant to *Environmental Assessment Review Process Guidelines Order* ("EARP GO"). Parks Canada is a program operated under the direction of the Department of Canadian Heritage, and JNP is administered by Parks Canada. The preliminary question arising is whether the Board in the present circumstances and as an initiating department, should conduct the required screenings pursuant to the EARP GO in conjunction with JNP. A review the events leading up to this issue is provided below.

On 20 December 1993 the Board issued Hearing Order OHW-1-93 stipulating the filing requirements and procedural directions for this hearing. This included procedural directions relating to the screening required under the EARP GO. Appendix IV to the Hearing Order, as amended, set out the timetable of events for this hearing. The time deadlines having particular interest to the issue at hand may be repeated as follows:

EVENT	DATE FOR FILING AND SERVICE
Interventions filed	5 January 1994
List of Interested Parties Released by the Board	7 January 1994
Intervenors Information Request to the Applicant	21 January 1994
Letters of Comment and Intervenors' Written Submissions	4 January 1994
Written Comments for the purpose of the Board's initial assessment as required by the *Environmental Assessment and Review Process Guidelines Order*	4 February 1994
Intervenors' final Written Arguments	11 March 1994

On 5 January 1994 JNP wrote to the Board seeking intervenor status in the OHW-1-93 proceeding. On 7 January 1994 JNP was included on the published List of Parties indicating JNP had been granted intervenor status by the Board.

The Board next received two correspondences from JNP, each dated 2 February 1994. The first letter provided JNP's submissions relating to the applied-for facilities constructed within Jasper National Park. Increased electrical energy demand, as well as the content of the environmental impact statement filed by the Applicant, were concerns raised by JNP. JNP also requested TMPL to perform an energy audit and requested TMPL to perform "a rescreening or reassessment" of the environmental impacts.

The second letter received by the Board dated 2 February 1994 was entitled "Intervention of Parks Canada, Jasper National Park". The intent of this document appears to be for JNP to formally "intervene" in the Environmental Assessment and Review Process initiated by the Board. No mention is made in this document that JNP considered itself as an initiating department for the purposes of EARP GO. Rather, it appears that JNP was following the process established under Appendix IV of the Hearing Order and providing its written comments about concerns the Board should take into consideration when performing the EARP GO initial assessment.

The next correspondence received from JNP was dated 2 March 1994. JNP filed with the Board a document entitled "Response of Parks Canada, Jasper National Park to Information Request No. 3 From TMPL". Although JNP was not asked any information requests by the Applicant, JNP took this opportunity to inform the Board of its other concerns with the proposed facilities located within Jasper National Park. Of particular interest to this issue is the following statement made by JNP at page 2:

> "Under section 12(f) of the EARP Guideline Order we feel that the potentially adverse environmental effects that may be caused by this project are unacceptable, in which case the proposal shall be either modified and subsequently rescreened or reassessed or be abandoned."

On 11 March 1994 JNP submitted its final written argument in compliance with Hearing Order OHW-1-93. Once again the main concern stated by JNP was the impact upon communities within Jasper National Park of the increased electrical power consumption resulting from the additional electrical demand. As well, JNP restated its intention of intervening in the Environmental Assessment and Review Process. In the second paragraph of its final written argument, JNP submitted:

> "Parks Canada wishes to intervene on the Environmental Assessment and Review Process Guideline Order for this project to have our electrical power concerns addressed and mitigated.
>
> Under section 12(f) of the EARP Guideline Order we feel that 'the potentially adverse environmental effects that may be caused by this project are unacceptable, in which case the proposal shall be either modified and subsequently rescreened or reassessed or be abandoned."

Also filed on 11 March 1994 was a letter informing the Board that JNP considered itself as an initiating department as that term is defined and used in the EARP GO. Notwithstanding the earlier opportunity to comment upon the EARP GO Review Process, this was the first indication to parties interested in this hearing that JNP was assuming a role other than intervenor. The effect of this determination, in JNP's view, was that a division of responsibilities as between the Board and JNP was necessary in order to perform the required screening pursuant to EARP GO.

TMPL subsequently filed its concerns with the apparent dual role JNP would perform if allowed to participate in the screening process as an initiating department. TMPL stated it would be inappropriate for JNP to conduct an environmental screening since JNP had adopted an advocacy role as an intervenor. In particular, TMPL pointed out JNP had incorporated into its final argument conclusive statements relating to section 12(f) of the EARP GO. As a result, TMPL submitted that JNP had prejudged the screening outcome and it would therefore be inappropriate for JNP to be included in the screening process as an initiating department.

Finally, by letter dated 24 March 1994, the Department of Canadian Heritage, Alberta Region ("Canadian Heritage") clarified Parks Canada's reference to section 12(f) of the EARP GO as found in JNP's final argument. Although this letter was filed after the evidentiary portion of this hearing was at an end, Canadian Heritage clarified the express comments found in JNP's final argument. Despite what was submitted, Canadian Heritage stated JNP had not, as of yet, screened the Applicant's applied-for facilities located within Japer National Park, nor had it made a determination under section 12 of the EARP GO. Canadian Heritage further suggested that the Board and Parks Canada jointly set out the terms of reference for the required environmental screening. This, in Canadian Heritage's view, would "allow the section 12 EARP GO determination to be approved by both the N.E.B. and Parks Canada."

Views of the Board

The Board's quasi-judicial role mandated under the *National Energy Board Act* requires it to treat all applications in accordance with procedural fairness. JNP has applied for, and received, intervenor status in this hearing. JNP made submissions that the proposal, as it related to Jasper National Park, was unacceptable pursuant to subsection 12(f) of the EARP GO. Subsequently, and after all steps were taken by JNP as an intervenor, it advised the Board that it was an initiating department under EARP GO. Given the lateness in JNP's determination of its status as an initiating department, the Board is concerned with the delay that would otherwise be suffered by the parties, if, at this point in time, the Board were to decide to conduct a screening in conjunction with JNP. Moreover, the Board is concerned how procedural fairness can be maintained if it is acting in conjunction with an intervening party which has made submissions setting forth its views on the matters to be determined by the screening process.

The Board notes the EARP GO has a policy objective of reducing the duplication of required screenings amongst initiating departments. However, given the requirements of procedural fairness, the Board is of the view that duplication, if it is to occur in this case, cannot be avoided.

As a result, the Board has determined that it would be inappropriate for it to act in conjunction with JNP in performing any screening required pursuant to the EARP GO. The Board has performed a screening pursuant to the EARP GO limited to the Board's affirmative regulatory duty. It has taken into consideration all written comments received from parties, including JNP, as was stated in Appendix IV of the OHW-1-93 Hearing Order. The Board recognizes that JNP may still be required to perform any obligations it may have under the EARP GO pursuant to its own mandate, including its permitting authority.

Chapter 3

Supply

3.1 Supply of Western Canadian Crude Oil and Equivalent

TMPL based its application on a forecast which was prepared for the Company by Purvin and Gertz and adjusted for the ERCB 94-B Alberta Oil Supply 1994 - 2005 Update ("ERCB 94-B") published by the Alberta Energy Resources Conservation Board ("ERCB") in January 1994, and an updated crude oil supply forecast from the Government of British Columbia. The Purvin and Gertz forecast was reproduced from a report entitled "Western Canadian Crude Oil and Pipeline Capacity Alternatives" that was prepared by Purvin and Gertz for TMPL, Interprovincial Pipe Line Inc. ("IPL"), Alberta Energy Company ("AEC") and Amoco Canada Petroleum Company Ltd. ("Amoco"). The report provided three supply forecasts of western Canadian crude oil and equivalent: a low case, a base case and a high case. In developing its analysis, Purvin and Gertz was guided by industry and government supply forecasts available in early 1993 and its own assessment of crude oil supply. No price assumptions were implied. TMPL initially based its application on the base case forecast, but noted that this case may be a conservative estimate of future production.

In January 1994, the ERCB issued report ERCB 94-B which presented a forecast for Alberta crude oil supply to the year 2005. The projection ranged from moderate to high, based on the expected level of drilling activity, and described an expected case crude oil supply scenario within this range. The analysis assumed a reference West Texas Intermediate ("WTI") crude oil price averaging $US 18 to 22 per barrel over the forecast period. The ERCB recognized the current oil price of $US 15 per barrel, but believed this to be a temporary condition that will not affect the industry's level of activity over the next few years. The crude oil supply forecast for British Columbia was updated in a government memorandum dated October 1993, which provided a five-year forecast of crude oil supply. In response to an NEB request for an updated crude oil supply analysis, TMPL provided a revised crude oil supply forecast adjusted for the expected case scenario from ERCB 94-B and the October 1993 Government of British Columbia forecast. The revised projection increased TMPL's western Canada crude oil supply forecast by an average of 19 700 m^3/d (123,900 b/d) above the Purvin and Gertz base case analysis for the period 1994 to 2000.

In its written submission, the Canadian Association of Petroleum Producers ("CAPP") presented two crude oil supply forecasts, an initial forecast identical to the forecast submitted by CAPP in the IPL expansion hearing (OH-1-93), and a revised forecast based on the ERCB 94-B expected case. The revised CAPP forecast indicates that total western Canadian crude oil supply will average 23 700 m^3/d (149,100 b/d) more from 1994 to 2000 than was estimated by CAPP in the OH-1-93 hearing, with a maximum upwards adjustment of 29 900 m^3/d (188,100 b/d) in both 1999 and 2000. When requested to discuss the impact of the oil price remaining at $US 15 per barrel over the forecast period, CAPP replied that its forecast did not contain an explicit crude oil price assumption and that the current low oil price would have no material effect on its forecast. The Alberta Petroleum Marketing Commission ("APMC") and Gulf Canada Resources Limited ("Gulf") agreed with CAPP that the ERCB 94-B expected case reflects a reasonable assessment of future western Canadian crude oil production. APMC also noted that historical forecasts have underestimated crude oil supply and future production

could exceed the expected case estimate. Gulf argued that the price range used by ERCB for its forecasts was reasonable based on historical data, and no adjustment was required for current low crude oil prices.

The Four Shippers[1] did not develop their own supply forecast, but utilized and revised the forecast filed by CAPP which used the ERCB 94-B expected case. After reviewing ERCB 94-B, the Four Shippers disagreed with using the expected case for Alberta crude oil supply. They argued that the $US 18 to 22 per barrel crude oil price is optimistic given the fact that the WTI price has been below $US 18 per barrel since September 1993, and that the long term trend is for lower crude oil prices. They also argued that there is a relationship between crude oil supply and price, and in light of their longer term expectation of crude oil pricing, they viewed the upper end of the ERCB's price forecast to be optimistic. Thus, while not necessarily endorsing the ERCB's methodology or assumptions, they concluded that the ERCB 94-B moderate case provides a proxy to reflect a lower crude oil price environment and would be more consistent with the outlook for weaker world crude oil prices. The original TMPL forecast (the Purvin and Gertz base case), the TMPL forecast revised for the ERCB 94-B expected case, the CAPP forecast revised for the ERCB expected case, and CAPP's forecast revised for the ERCB moderate case are illustrated in Figure 3-1.

3.2 Supply of Western Canadian Natural Gas Liquids

TMPL noted in its application that in addition to the expected increase in supply of crude oil and equivalent, discussions with industry indicated that there will be an increase of around 3 200 m^3/d (20,200 b/d) in the supply of natural gas liquids ("NGL") recovered from natural gas. CAPP stated that it did not include NGL in either of its forecasts, but noted that the Eight Shippers[2] in the OH-1-93 hearing forecasted an increase in NGL production of approximately 4 000 to 6 000 m^3/d (25,200 to 37,800 b/d). No other comments were received from intervenors.

3.3 Availability of Light Sour Crude Oil

Regardless of producibility forecasts of total crude oil and equivalent, TMPL stated that the supply of light sour crude oil available at Edmonton will increase due to the planned segregation of this crude oil on the Peace and Bonnie Glen/Rangeland Pipelines, as well as projects the company is working on with Bonnie Glen Pipeline and Gibson Petroleum Company Limited ("Gibson"). TMPL estimates that light sour crude oil supply available at Edmonton will increase from 9 500 m^3/d (59,800 b/d) in 1993 to a high of 15 500 m^3/d (97,600 b/d) in 1995 and then decline to 14 700 m^3/d (92,600 b/d) by the year 2000. TMPL's analysis of light sour crude oil availability was not questioned by intervenors.

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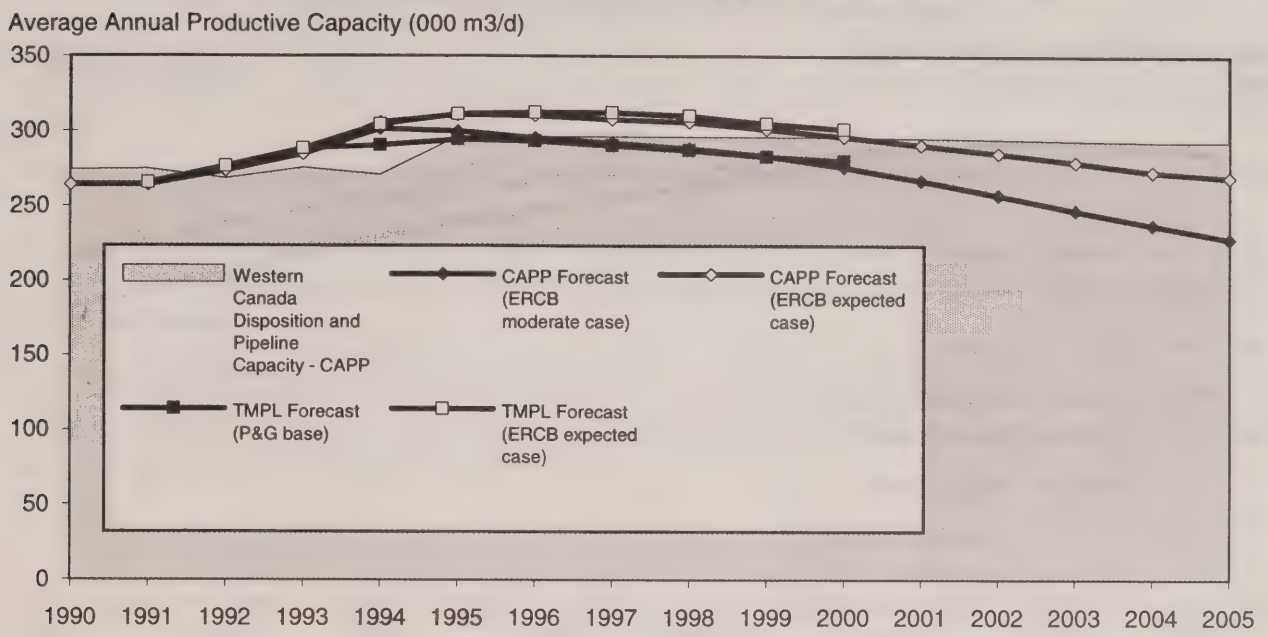
[1] The "Four Shippers" refers to a group of companies comprised of Shell Canada Limited, Petro-Canada, Imperial Oil Limited, and Chevron Canada Limited. All are major producers, refiners and shippers of hydrocarbons on TMPL, having shipped approximately sixty-seven percent of the system volumes in 1993.

[2] The "Eight Shippers" refers to a group of companies comprised of Amoco Canada Petroleum Ltd., Gulf Canada Resources Limited, Husky Oil Limited, Imperial Oil Limited, Mobil Oil Canada, PanCanadian Petroleum Limited, Petro-Canada and Shell Canada Limited that intervened as a single party in the IPL expansion hearing OH-1-93.

Figure 3-1
Supply and Disposition of Western Canada Crude Oil and Equivalent

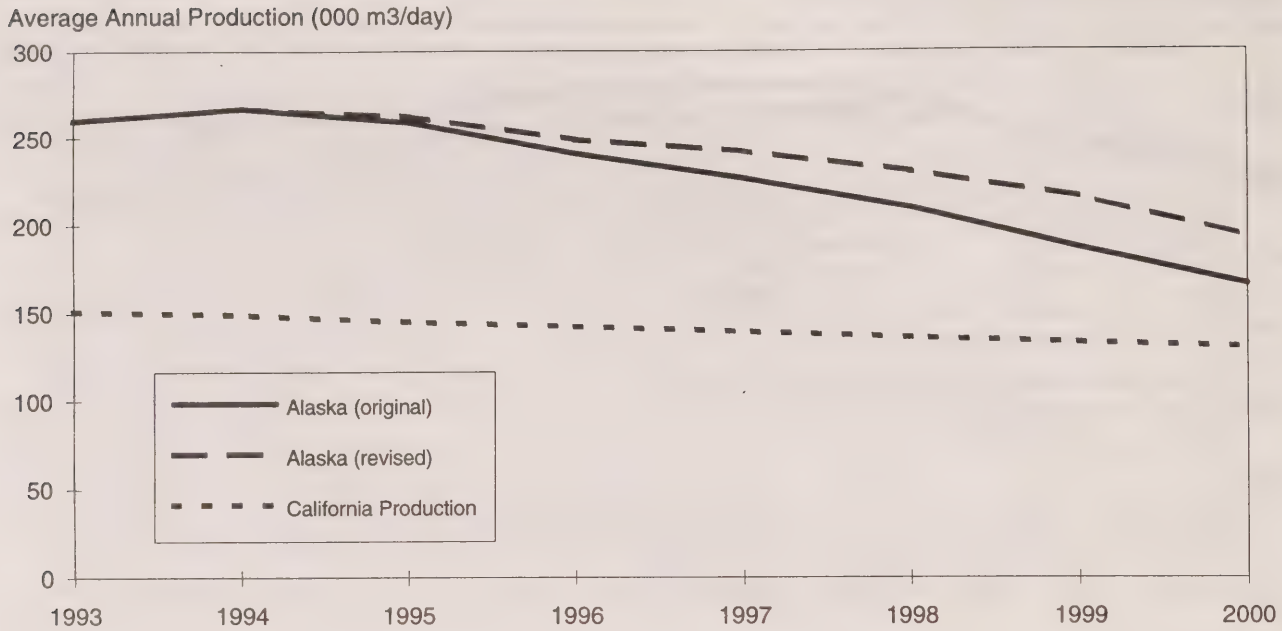


3.4 Supply of Alaska North Slope and California Crude Oil

In support of its application, TMPL forecasted a decline in crude oil supply in both Alaska and California. In response to an information request from the Four Shippers, TMPL revised its forecast of Alaska production upwards based on information contained in the State of Alaska's Fall 1993 Revenue Sources Book. The original and revised forecasts are shown in Figure 3-2. In the supplemental information filed by TMPL, the Company observed that despite significant investments to sustain production, supply from the Prudhoe Bay field, the largest field in Alaska, continues to decline. TMPL reported that production from the field during the 1993 summer season dropped to 244 800 m^3/d (1,542,000 b/d), the lowest daily volume since 1982. The Company argued that due to the very high production rates from Prudhoe Bay, normal production declines from this field tend to overshadow possible increases from other small projects, and if the production declines are to be offset, new big fields are required to be developed. Referring to developments at Point McIntyre, and delays in production or downgrading of prospects at Kuvlum, Wild Weasel and Sunfish, TMPL stated that it is unlikely that any new discoveries can be brought on line that would offset the current production decline until after the end of the decade.

In written evidence, the Four Shippers compared TMPL's original and revised forecasts for Alaska North Slope ("ANS") production with forecasts prepared by the Alaska Department of Revenue, Petroleum Industry Research Associates ("PIRA"), Cambridge Energy Research Associates ("CERA"), Canadian Energy Research Institute ("CERI") and the petroleum consultant firm Arthur D. Little Inc., and determined that both of TMPL's projections were within the range established by these forecasts.

Figure 3-2
Alaska and California Crude Oil Supply Forecasts



The original TMPL projection resided at the lower end of the range while the revised forecast fit in the mid to upper range. The Four Shippers did not disagree with TMPL's revised forecast, and noted that it was up nearly 9 500 m^3/d (60,000 b/d) over the original forecast for the years 1995 to 1997. The text of a speech presented by Mr. James E. Eason, an official of the Government of Alaska, to a CERI conference in January 1994 was submitted to the hearing by the Four Shippers. Mr. Eason stated that Alaska has tremendous undiscovered resource potential, but in the years ahead it will take a lot more time and additional major investments by industry to recover the remaining oil reserves in the known fields. He also stated that the production decline curves for the state provide reason for concern because the eight to ten percent per year decline in production from the major North Slope fields will reduce the current output from this area in the early part of the next century by fifty percent.

The California crude oil supply forecast submitted by TMPL was not challenged.

Views of the Board

The Board recognizes the uncertainties associated with forecasts of the supply of crude oil and other commodities shipped on the TMPL system, and considers that the forecasts of the supply of crude oil and equivalent from western Canada submitted or endorsed by TMPL, CAPP and the Four Shippers are reasonable, and lie within the range of possibilities. The Board finds that TMPL's revised forecast of western Canadian crude oil supply, including the availability of light sour crude oil and NGL, and TMPL's forecast of California and the revised forecast of Alaska crude oil production are acceptable.

Chapter 4

Markets

4.1 Demand for Western Canadian Crude Oil and Equivalent

Based on the evidence provided by TMPL using ERCB's revised projected supply forecast and CAPP's forecast of disposition, Table 4-1 sets out forecast disposition of western Canadian crude oil and equivalent.

In its written argument, TMPL states that on the basis of the revised production forecast, it agrees with CAPP that there will be a significant physical pipeline capacity shortfall even after the IPL expansion of 27 100 m^3/d (170,000 b/d) is completed.

Table 4-1
Forecast Disposition of Western Canadian Crude Oil
($10^3m^3/d$)

	1993	1995	1997	2000
Forecast Production	288.0	311.0	312.0	301.0
Less - Disposition [1]	114.2	108.0	108.0	107.4
- IPL Capacity ex Kerrobert	161.1	188.1	188.1	188.1
	275.3	296.1	296.1	295.5
Shut-in	12.7	14.9	15.9	5.5

(1) Disposition to western Canada and exports via Milk River, Rangeland and TMPL.

Views of the Board

The Board accepts TMPL's method of determining the disposition of western Canadian crude oil and equivalent, and finds that there will be insufficient pipeline capacity through the year 2000.

4.2 Markets for Incremental Crude Oil and Equivalent

TMPL indicated in its application that it delivers crude oil and refined petroleum products to four primary markets, as follows:

i) crude oil and refined petroleum products to Vancouver, B.C.;

ii) refined petroleum products to Kamloops, B.C.;

iii) crude oil exports via its Westridge marine terminal to foreign markets; and

iv) crude oil exports to refineries located in Washington State.

Table 4-2 sets out TMPL's demand forecast for the period 1995 to 1999 under two scenarios - with expansion and without expansion in comparison to 1993 and 1994.

Under the expansion scenario, the primary increase in throughput will be higher deliveries of light crude oil to offshore markets via TMPL's Westridge dock as well as increased shipments of crude oil and condensate to Washington State refineries. TMPL states that the decline in crude oil production in the State of Alaska will increase the price of ANS crude oil such that West Coast refineries will look to Alberta producers for increasing volumes of segregated light sour crude, a market at least as attractive as Chicago. The increased pipeline capacity would also allow export tankers of condensate into the Pacific Rim, and provide an opportunity to move light crude oil offshore when required by unanticipated developments, such as pipeline outages.

According to TMPL, the crude supply for the West Coast is separated into two very distinct segments: the Vancouver area and the U.S. West Coast including Washington State.

The Vancouver area is closely tied to the production of western Canadian crude oil and the movement of refined petroleum products from Edmonton to Vancouver. Due to logistical constraints, Vancouver refineries will continue to acquire all of their crude oil feedstock from equity production or other producers in Alberta and B.C., and will be required to meet the price of crude oil set at Edmonton by other markets. Refined petroleum products into Vancouver will generally be supplied from Edmonton, although supply disruptions and market conditions may provide circumstances where refined products will be imported.

The U.S. West Coast market is dominated by crude oil production from Alaska (primarily ANS), although crude oil production in California continues to play a significant role in the overall West Coast balance. In addition to Western Canadian supplies, there are also imports of foreign crude oil into the West Coast, but these are small volumes of lighter materials required to balance the

Table 4-2
Trans Mountain Demand Forecast [1]
1995 - 1999
(m^3/d)

	1993	1994	Expansion	No Expansion
Vancouver				
-Crude Oil	14 792	13 322	7 300	7 500
-Refined Products	1 735	4 891	9 900	9 900
-Semi-Refined Products	1 326	1 451	2 200	2 000
-Other	293	1 091	1 000	1 000
	18 146	20 755	20 400	20 400
Kamloops				
-Refined Products	3 165	2 827	2 900	2 900
Offshore via Westridge				
-Light Crude Oil	1 276	581	1 800	700
-Condensate	1 091	1 564	1 600	1 100
-Heavy Crude Oil	490	252	300	300
	2 857	2 396	3 700	2 100
Washington State				
-Light Sweet Crude Oil	7 484	5 930	4 900	4 200
-Light Sour Crude Oil	2 138	3 644	8 800	5 000
-Condensate	112	575	800	800
	9 734	10 150	14 500	10 000
Total	**33 902**	**36 128**	**41 500**	**35 400**

(1) Totals may not add due to rounding as per TMPL's application.

production of certain refineries. At present, the U.S. West Coast is a net exporter of crude oil, but this is expected to reverse as Alaska and California crude oil production declines. TMPL provided evidence that showed ANS crude oil movements to the U.S. Gulf Coast have declined by 70 percent since 1990.

The price that refiners pay for any type of crude oil on the U.S. West Coast is controlled by the price of ANS and its discount relative to crude oil prices on the U.S. Gulf Coast. The U.S. government has placed a restriction on exports of ANS crude oil. TMPL submitted that by 1996, shipments of ANS crude oil to the U.S. Gulf Coast will cease. When this occurs, the ANS price on the U.S. West Coast will no longer reflect a discount from U.S. Gulf Coast pricing resulting in the market for western Canadian light sour crude oil improving.

In reply argument, TMPL stated that the expectation of increased sales of light sour crude oil to U.S. refiners has been, and remains, the principal factor demonstrating the need for pipeline expansion. Forecasts of increased Canadian crude oil supply also demonstrates the need for additional pipeline capacity.

CAPP supports the expansion as it will help reduce shut-in of crude oil in 1994 and beyond, as well as provide western Canadian crude oil producers with opportunities to further diversify markets. CAPP remains concerned that the approved IPL expansion provides inadequate room for error. Also, this expansion provides producers with an alternative, albeit a limited one, to the IPL system in the event of capacity disruptions.

Gulf states that there is sufficient demand by Washington State refineries to absorb additional volumes of Canadian light sour crude oil. Moreover, the refinery capacity (Shell, Texaco and Tosco) in this State seeking Canadian crude oil is 44 300 m^3/d (278,600 b/d).

The APMC submitted that the expansion is warranted based on the economic benefits associated with the project. The APMC stated that marketing opportunities on the U.S. West Coast for Canadian light sour producers will continue to increase as Canadian light sour crude oil becomes more competitive with ANS.

Norcen Energy Resources Limited ("Norcen") by letter of comment indicated that it is not opposed to the full TMPL expansion. However, Norcen pointed out that if TMPL's throughput forecast is not realized, a higher toll will result thereby reducing the competitiveness of Canadian light sour crude oil.

Gibson and PanCanadian Petroleum Limited ("PanCanadian") in their letters of comment supported TMPL's expansion. PanCanadian indicated that this expanded capacity will offer enhanced market opportunities. Gibson stated that recent changes in ownership of U.S. West Coast refineries and declining production of traditional feedstock also bode well for increased demand of Canadian light sour crude oil.

In response to information requests, two Washington State refiners, Shell Oil Company ("Shell") and Texaco Trading and Transportation Inc. ("Texaco") have indicated that they are interested in purchasing Canadian light sour crude oil if the price is competitive.

In final argument, the Four Shippers stated that while they are not major exporters, they are major producers as well as major shippers having shipped approximately 67 percent of the volumes on

TMPL in 1993. The Four Shippers indicated that they will continue to ship in excess of 50 percent of the volumes in the future, even if TMPL is expanded and full.

In their written evidence, the Four Shippers point out that the IPL bottleneck has had a significant effect on the increased crude oil volumes shipped on TMPL. The Four Shippers believe that the IPL expansion will see TMPL export volumes return to traditional levels. The Four Shippers state that approximately 90 percent of western Canadian crude oil movements are currently made to refiners in the western provinces, Ontario and Quebec and the U.S. Midwest. Most of the remaining volume is processed by refineries in Montana, Pennsylvania and the Puget Sound area of Washington State.

The Four Shippers stated that TMPL has ignored the flexibility of supply afforded the Washington State refiners by nature of their access to tidewater and tanker unloading facilities. It is clear that waterborne crude from South America, the Far East and the Middle East all access the west coast of the United States. Any views on evolving demand and pricing improvements for Canadian light sour crude oil in the Washington market must recognize the market discipline provided by waterborne crude, regardless of the rate of decline in ANS production.

Since U.S. West Coast and Gulf Coast pricing are linked by the ability to tanker crude oil between these markets, the only remaining independent factor is the cost to move imported crude oil to the mid-continent. Therefore, it is the Four Shippers' view that when one compares the U.S. West Coast and the eastern markets for Canadian light sour crude oil, the tightening of the mid-continent pipeline infrastructure will provide a long term favourable bias for the markets served by IPL.

In conclusion, the Four Shippers indicated the fact that certain Canadian crude have recently been observed to be more competitive on the West Coast than in Chicago is a symptom of IPL apportionment, and the pricing of Canadian crude oil will return to historical relationships with its elimination.

KerMor Trading Company Ltd. ("KerMor") states that it considers the export market to be a spot market into which capacity is sold when the price is right.

Views of the Board

The Board believes that the Chicago market is, and will continue to be, the largest single export market for western Canadian crude oil. However, the Board is also of view that the markets served by TMPL could absorb some of the expected increase in production of western Canadian crude oil, including some light sour crude oil production, given the forecasted production decline in Alaska and California.

Chapter 5

Facilities

TMPL's applied-for expansion includes the following:

i) reactivation of the 81.1 km, 762 mm diameter (NPS 30) Edson to Hinton pipeline loop;
ii) deactivation of the 81.1 km, 610 mm diameter (NPS 24) Edson to Hinton pipeline;
iii) modifications to ten existing pump stations, two by-pass relief valve sites, and construction of a new pump station at the former Kingsvale pump station site; and
iv) installation of a domed roof on Tank 103 at the Company's Sumas Tank Farm.

TMPL indicates the pipeline capacity calculations were performed with its computerized hydraulic model. The applied-for expansion would increase the sustainable capacity from 33 300 m^3/d to 39 400 m^3/d (209,500 b/d to 247,800 b/d) between Edmonton and Kamloops, and would increase the sustainable capacity from 37 900 m^3/d to 43 800 m^3/d (238,400 b/d to 275,500 b/d) between Kamloops and Burnaby. In response to an information request from the Four Shippers, TMPL indicated that the Stage 2 Expansion proposal was developed from 70 simulations of different pipeline configurations.

TMPL proposes to install item iv) to reduce the odorous tank emissions (see also section 7.2.3, Environmental Matters, Pipeline Facilities - Fugitive Emissions) associated with the increased throughput at the Sumas Tank Farm. The geodesic dome roof on Tank 103 would be similar to that installed previously on Tank 104 at the same location.

No intervenor questioned the design basis of the proposed expansion, assuming the proposed volumes are to be transported. Norcen supported only the reactivation of the Edson to Hinton 762 mm diameter (NPS 30) loop, viewing it as a cost-effective and timely way to increase capacity by approximately 1 370 m^3/d (8,600 b/d). TMPL responded that this increase in capacity would not come close to meeting the shortfall in physical pipeline capacity, and that without the other proposed modifications the benefit from reactivating the loop would be reduced due to the current pumps operating at less than optimal efficiencies and hydraulic constraints between Kamloops and Sumas.

TMPL indicated that a hydrostatic testing plan would be submitted to the Board for the reactivation of the Edson to Hinton pipeline loop. TMPL also indicated that planned cut-outs to the 762 mm diameter (NPS 30) loop will be completed during the 1993-1994 fall winter season prior to hydrostatic testing.

Views of the Board

The Board is of the view that the applied-for modifications, including the pump additions and modifications, deactivation of the 610 mm diameter (NPS 24) pipeline loop and installation of the geodesic dome roof on Tank 103 are appropriate for the

purposes of the proposed expansion. The Board is satisfied that the design is safe and that construction and commissioning would be closely monitored to ensure that all standards and design requirements are met. The Board, pursuant to section 58 of the Act, would therefore exempt such facilities from the requirements of leave to open.

The reactivation of the 762 mm (NPS 30) Edson to Hinton loop shall be subject to TMPL filing and receiving approval of the Board for the hydrostatic test plan and shall be subject to leave to open requirements pursuant to section 47 of the Act.

Chapter 6

Early Public Notification and Land Matters

6.1 Early Public Notification

TMPL, as part of its application process and consistent with the Board's Memorandum of Guidance Concerning Early Public Notification ("EPN"), undertook a program which was carried out mainly during the 15-28 September 1993 period.

The phased EPN consisted of the following:

i) A letter accompanied by a fact sheet and project map was distributed to government agencies along TMPL's pipeline system and interested parties within the four impacted communities of Hinton and Edson, Alberta and Merritt and Sumas, British Columbia;

ii) Community information sessions were held in the communities of Sumas, Merritt, Edson and Hinton to explain the project and determine public interest and concerns;

iii) A community mail drop delivered letters of invitation, a fact sheet, and a project map to landowners, business and community leaders, native Indian bands, special interested groups, and service clubs, prior to the four community information sessions; and

iv) A newspaper supplement providing information on the proposal was published before each community information session in community papers whose circulation covered the area of the impacted community.

As a result of the EPN program, TMPL received and responded to approximately 30 inquiries concerning the Stage 2 Expansion Project.

Views of the Board

The Board is satisfied that TMPL has notified and discussed the proposed application in a timely fashion with government agencies, public interest groups, and affected landowners and responded appropriately to concerns expressed.

6.2 Land Matters

TMPL stated that no new lands or land rights would be required, with the exception of the lands required for the Hinton Scraper Trap. TMPL indicated that an application to amend the current lease for additional land required at the Hinton Scraper Trap site was made to the Alberta Department of Environmental Protection, Land, and Forest Services.

Further, TMPL stated that with respect to cut-outs, additional working space or access to the work site may be required. TMPL will require permission from the landowners in those circumstances.

Views of the Board

The Board notes that in this situation no new land rights are required, with the exception of the lands required for the Hinton Scraper Trap. The Board finds that TMPL's anticipated land requirement at the Hinton Pump Station and the possible requirement for temporary work space are reasonable and justifiable.

Chapter 7

Environmental Matters

7.1 Assessment Process

The information submitted by TMPL provided a description of the environmental and socio-economic setting, an assessment of the potential adverse environmental effects, and recommendations to avoid, prevent or mitigate the potential adverse environmental effects resulting from the applied-for Stage 2 Expansion Project facilities.

7.2 Pipeline Facilities

7.2.1 Noise

Concerning the various pump modifications, TMPL submitted that there is no anticipated increase in noise emissions associated with the proposed modifications. TMPL indicated that the addition of a pump at the Sumas Station would result in a negligible noise level increase. TMPL estimated that the noise level at 300 m (984 ft) would be 41 dB[1] with three pumps in operation.

With respect to the Kingsvale Pump Station, TMPL submitted that the noise level from the proposed pump units will not exceed 85 dB(A)[2] at a distance of one metre (3.2 ft) from the motor casing. A noise level of 47 dB(A) is predicted at the fenceline based on measured noise levels at the Albreda Pump Station which has similar pumps.

TMPL undertook to minimize the noise associated with the nitrogen venting procedure for Edson-Hinton 762 mm diameter (NPS 30) pipeline loop. TMPL stated that it would reduce the pressure of the nitrogen at the Hinton Scraper Station, as there are no residences in the vicinity, and TMPL would control the venting rate at both Edson and Hinton thereby minimizing the resulting noise. Further, TMPL stated it would notify residents in the vicinity of the Edson Station prior to the nitrogen venting, and that it would monitor noise levels during the venting procedure.

7.2.2 Soil and Vegetation

TMPL indicated that it plans four cut-outs prior to the reactivation of the 762 mm diameter (NPS 30) pipeline loop. TMPL indicated that topsoil segregation would be practiced, original drainage would be restored, and water pumped from the excavation would be discharged in order to minimize siltation and soil erosion. Further, for the golf course impacted by the cut-out, TMPL indicated that the disturbed area would be restored to the satisfaction of the golf course operator.

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[1] dB - the decibel is a function of the ratio of the actual measured sound pressure level to the sound pressure level which is at the threshold of the human ear.

[2] dB(A) - is the weighted decibel that takes into account the detection characteristics of the human ear.

With respect to the Kingsvale Pump Station, TMPL indicated that the results from the soil and ground water contamination investigation confirmed that the on-site petroleum contamination is below the Level C criteria specified for industrial land use in the *Criteria for Managing Contaminated Sites in British Columbia* dated November 1989. Further, TMPL indicated that, given the localized areas of soil contamination and the geology of the area, the contamination would not migrate off site. In addition, TMPL indicated that the sump tank design and installation for the Kingsvale Station and Hinton Scraper Trap would comply with the applicable portions of the Canadian Council of Ministers of the Environment, *Environmental Code of Practice for Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products,* 1993 Edition, governing installation, leak detection, spill protection and overfill protection.

7.2.3 Fugitive Emissions

TMPL submitted that the proposed addition throughput would increase fugitive emissions[1] from crude oil tankage at the Edmonton Terminal. TMPL further proposed, under separate application (Board Order XO-T4-7-94), to install new primary and secondary wiper seals on oil storage tankage ultimately reducing evaporative losses.

TMPL stated that the increase throughput at the Sumas Tank Farm would increase the potential for odorous sulphur emissions. TMPL further stated that the installation of a geodesic dome roof on Tank 103 would permit the collection of odorous sulphur compounds associated with evaporative losses. TMPL indicated that the proposed vapour scrubber, made under separate application (Board Order XO-T4-7-94), would reduce odorous sulphur compounds under the normal operating conditions, to meet Level A one hour average ambient objective for hydrogen sulphide as specified in Table VII of the *Pollution Control Objectives of the Chemical and Petroleum Industries of British Columbia.*

7.2.4 Hydrology

TMPL indicated that prior to conducting a hydrostatic test of the 762 mm diameter (NPS 30) pipeline loop it would obtain the appropriate provincial approvals for the taking and discharging of waters including the utilization of intake screens. TMPL stated that prior to discharging the hydrostatic test water the quality of that water would be assessed through laboratory analysis, if required. Further, TMPL confirmed that it would prevent stream scour during the discharge of the hydrostatic test water. TMPL, in its contingency plan, outlined the actions that it would implement in the event of an accidental release of contaminated hydrostatic test water.

7.2.5 Increased Power Consumption

TMPL indicated that the modifications at all pump stations, with the exception of Jasper and Kingsvale, would not exceed the power specifications for which they were designed. TMPL submitted that the discussions with representatives of the three electric utilities revealed that there would be no problem with supplying the additional power needs of the expansion.

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[1] fugitive emission - refers to any gaseous emission other than from combustion.

With respect to the Jasper Pump Station ("Jasper PS"), TMPL stated that the calculated peak power consumption is 3200 kW, an increase of 300 kW, which is within the limits set by the power supply agreement between TMPL and Alberta Power of 3750 kVa, and is less than 1.4 percent of the total peak power demand for the townsite of Jasper. Furthermore, TMPL stated that there is no evidence to indicate that the Alberta Palisades Generating Station ("PGS") would reach its peak capacity. TMPL submitted that they would be installing variable frequency drives as well as high efficiency motors with a specified minimum requirement of 95 percent efficiency at 90 percent load. TMPL also confirmed that a preliminary energy audit was conducted at the Jasper PS in July 1993 prior to it joining the "Jasper Energy Efficiency Program" ("JEEP"). Also, TMPL confirmed that it would follow up on the recommendations made by the energy audit. In addition, after TMPL made the commitment to participate in JEEP, another more formal energy audit was completed in February 1994. TMPL stated that it had completed a draft Environmental Impact Assessment and Environmental Protection Plan ("EPP") for routine maintenance projets within the park. TMPL submitted that the EPP recognizes the value of Jasper National Park's ecosystems and heritage sites and includes measures to protect them. TMPL indicated that three seminars have been held in Jasper National Park since 1990 to review the location of the pipeline system, hazards of the petroleum transported and how to coordinate emergency response efforts.

7.3 Views of Interested Parties

JNP raised concerns in written submissions and in argument that the potential for increased power use by TMPL would have significant impacts in JNP. JNP submitted that small power increases by Alberta Power customers would result in PGS eventually having to connect to the provincial power grid in order to meet the power requirements of the Jasper area. This possible connection to the provincial grid would then have a negative impact on the Jasper community as further development of the area would be easier with this provincial power connection. Further, JNP indicated that the increase in energy consumption by TMPL at the Jasper PS would negate any power savings that have been achieved through the local energy conservation program, JEEP. JNP stated that energy audits and energy extensive energy efficiency conversions reduced power consumption in the area by 1500 kW. JNP requested that TMPL conduct an energy audit at its Jasper PS with a view to reducing the energy demand on the power station. JNP stated that the modifications at the Jasper PS did not support its mission to "*promote understanding, appreciation and respect for natural ecosystems and cultural heritage*".

Views of the Board

With respect to concerns raised about the increased power consumption within Jasper National Park, the Board is persuaded that TMPL has mitigated the effects of the modifications at the Jasper PS by its commitment to install high efficiency motors and variable speed drives. Further, the Board supports TMPL's participation in the JEEP program and notes TMPL's commitment to follow up on the recommendations made in a recent energy audit of the Jasper PS.

With respect to the other environmental matters, the Board is of the view that if TMPL's proposed environmental protection measures are implemented, the environmental effects of the proposed pipeline facilities would be insignificant or

mitigable with known technology. The Board will require TMPL to file all federal and provincial permits or authorizations which contain environmental conditions.

Chapter 8

Financial Matters and Toll Design Issues

8.1 Financial Matters

TMPL forecasts the total cost of the Stage 2 Expansion Project to be approximately $27.4 million. Of this amount, $25.8 million was included in the Company's 1994 applied-for rate base for toll-making purposes (this excludes contingencies and related AFUDC as per the NEB's letter dated 16 February 1989). TMPL stated that it intends to finance the construction of the facilities by means of internally generated funds and short-term borrowing from Canadian chartered banks. The Company added that as market conditions permit, the short-term borrowing will be replaced with long-term securities. TMPL is not seeking financial participation by other parties.

Views of the Board

In the Board's view, TMPL will be able to fund the expansion project in the manner described by the Company.

8.2 Tolling Methodology and the Impact on Existing Tolls

TMPL proposed that for toll-making purposes the applied-for facilities be rolled into existing rate base on the basis that the modifications being made are for the purpose of providing basic service.

Certain intervenors opposed to the expansion, primarily Chevron and KerMor, suggested that if the Board approves the proposed facilities alternative tolling methodologies, such as requiring throughput and financial guarantees from supporting parties, should be prescribed. This would provide certainty that the proposed facilities are for the public convenience and that risk is properly allocated. These intervenors stated that with rolled-in tolls, risks are entirely allocated to existing captive shippers. Only by imposing guarantees would risks be transferred to the appropriate market, thereby possibly reducing any previously optimistic forecasts.

KerMor was further concerned with the impact of TMPL not realizing forecast throughput and the resulting additional costs being directly passed on to the consumer via the shippers. In considering that the B.C. petroleum product consumer is in essence a captive market, KerMor stated that it is inappropriate to hold a domestic market accountable for an investment designed to capture an export opportunity. In addition to financial and throughput guarantees, KerMor suggested that in order to allocate risk fairly, mechanisms such as rate ceilings and tiered ROE level guarantees be considered.

TMPL rejected the suggestion of requiring conditions such as guarantees from certain shippers, stating that the proposed treatment of rolling-in tolls is consistent with previous Board decisions regarding capacity expansions for TMPL and other pipeline systems. TMPL added that such requirements as suggested by opposing intervenors were discriminatory to new shippers. Supporting intervenors stated that since they were not required by TMPL to provide guarantees, they had not done so. TMPL argued that the application doesn't contain optimistic forecasts from shippers but rather forecasts by

neutral parties such as the ERCB. TMPL also noted that KerMor did not present any evidence with respect to recent changes in consumer prices of petroleum products as a result of changes to transportation costs.

In support of its proposal to use the rolled-in toll methodology, TMPL provided the impact of the Stage 2 Expansion Project on tolls under a number of utilization scenarios. The Company projected that tolls after the expansion would be 10 percent lower than tolls based on a "no expansion" scenario. This projection is based on the pipeline operating at sustainable capacity in both cases (41 500 m^3/d with expansion versus 35 400 m^3/d without expansion). TMPL pointed out that only approximately 40 percent of the total applied-for incremental volume (2 400 m^3/d out of 6 100 m^3/d) associated with the expansion would be needed to cover additional costs and sustain the same toll as the no expansion case. Any additional throughput beyond this would serve to decrease tolls. As a result of the expansion, TMPL forecasted that operating and maintenance expenses would increase by $3.7 million in 1995 and 2 percent (provision for inflation) thereafter. This was considered in determining the toll impact.

Opposing intervenors commented on the reasonableness of TMPL's forecast for throughput in determining the impact on tolls. Under other more conservative forecasts, for example 30 000 m^3/d (188,700 b/d) put forth by the Four Shippers, the impact on tolls would be considerably less attractive. The issue of the proper throughput forecast is discussed in detail in Chapter 4 "Markets".

Views of the Board

The Board notes that the facilities being applied for primarily represent modifications or upgrades to plant already in existence. In the Board's view, since the purpose of the proposed expansion is to increase the transportation capacity of an existing mainline system, these facilities should be tolled on a rolled-in basis.

Chapter 9

Disposition

The foregoing constitutes the Board's Reasons for Decision in respect of the application considered by the Board in the OHW-1-93 proceeding.

The Board finds that the supply of liquid hydrocarbons available to TMPL will exceed current capacity through to 2000. Furthermore, the Board believes that the Chicago market is, and will continue to be, the largest single export market for western Canadian crude oil. However, the Board is also of view that the markets served by TMPL could absorb some of the expected increase in production of western Canadian crude oil, including some light sour crude oil production, given the forecasted production decline in Alaska and California. The Board is satisfied that the evidence demonstrates a strong likelihood that the facilities will be used at a reasonable level and finds that the proposed facilities are required by the present and future public convenience and necessity. The Board is also of the view that the design of the facilities is satisfactory to ensure the safe and environmentally sound construction and operation of these facilities. Therefore, the Board has issued Order XO-T4-15-94 dated 12 April 1994 pursuant to section 58 of the Act (Appendix II).

With regard to the tolling methodology, the Board finds that a rolled-in design would be appropriate for these expansion facilities.

J.-G. Fredette
Presiding Member

A. Côté-Verhaaf
Member

R. L. Andrew, Q.C.
Member

Calgary, Alberta
April 1994

Appendix I

List of Issues

The list of issues that appeared in Appendix V of Hearing Order OHW-1-93 was as follows:

1. The need for an expansion of the TMPL pipeline system, including:

   (i) the reasonableness of TMPL's overall and project-specific domestic and export demand forecasts, having regard to potential competition from other sources of crude oil or petroleum products;
   (ii) the reasonableness of TMPL's supply forecasts, having regard to potential competition from other crude oil pipelines;
   (iii) the appropriate sizing and timing of any such expansion; and
   (iv) the likelihood of the proposed expansion facilities being used at a reasonable level over their economic life.

2. The effects of the proposed expansion, including the effect on tolls.

3. The safety of the design and operation of both the pipeline facilities expansion and the pipeline reactivation.

4. The potential environmental effects and the potential socio-economic effects during the construction and operation of the proposed expansion facilities.

5. The appropriate terms and conditions to be included in any approval which may be issued.

Appendix II

Order XO-T4-15-94

IN THE MATTER OF the *National Energy Board Act* ("the Act") and the regulations made thereunder; and

IN THE MATTER OF an application, pursuant to section 58 of the Act, by Trans Mountain Pipe Line Company Ltd. ("TMPL"); filed with the Board under File No. 3400-T004-36.

B E F O R E the Board on 12 April 1994.

WHEREAS the Board has received an application by TMPL dated 29 October 1993 respecting certain modifications and facilities to be added to its pipeline system, known as the Stage 2 Expansion Project;

AND WHEREAS the Board has conducted the written public hearing OHW-1-93 to consider the Stage 2 Expansion Project;

AND WHEREAS pursuant to the *Environmental Assessment and Review Process Guidelines Order* ("EARP Guidelines Order"), the Board has performed an environmental screening and has considered the information submitted during these proceedings;

AND WHEREAS the Board has determined, pursuant to paragraph 12(c) of the EARP Guidelines Order, that the potentially adverse environmental effects, including the social effects directly related to those environmental effects, which may be caused by the Stage 2 Expansion Project are insignificant or mitigable with known technology and public concern, including that submitted by Parks Canada, about the Stage 2 Expansion Project does not warrant referral for a panel review;

AND WHEREAS the Board has examined the application and considers it to be in the public interest to grant the relief requested therein with respect to the project referred to above;

IT IS ORDERED THAT the Edson-Hinton Loop Reactivation (Job 3197) is exempt from the provisions of paragraph 30(1)(a), subsection 30(2) and section 31 of the Act, and that TMPL shall submit to the Board and obtain Board approval for the hydrostatic testing plan for the 762 mm outside diameter (NPS 30) Edson to Hinton pipeline loop;

IT IS FURTHER ORDERED that the Stage 2 Expansion Project as described in Schedule A attached to and forming part of this Order, with the exception of the Edson-Hinton Loop Reactivation (Job 3197), is exempt from the provisions of sections 30, 31 and 47 of the Act, and all projects described in Schedule A are subject to the following conditions:

1. Unless the Board otherwise directs, TMPL shall:

(a) prior to the commencement of Stage 2 Expansion Project, file with the Board copies of all federal and provincial permits or authorizations which contain environmental conditions;

(b) during construction of the Stage 2 Expansion Project, maintain a file in the construction office(s) containing such permits and authorizations together with all permits subsequently obtained, copies of which shall be filed with the Board;

2. Unless the Board otherwise directs, prior to the commencement of the construction of the Hinton Scraper Traps (Job 3198), TMPL shall advise the Board when the amended lease agreement at the Hinton site is obtained from the Alberta Department of Environmental Protection, Land, and Forest Services; and

3. Unless the Board otherwise directs prior to 31 December 1995, this Order shall expire on 31 December 1995 unless the construction or installation with respect to the Stage 2 Expansion Project has commenced by that date.

Trans Mountain Stage 2 Expansion Project
Hearing OHW-1-93
Schedule A to Order XO-T4-15-94

Job Number	Description	Applicant's Estimated Cost
Job 3193	Edmonton Station	$ 267 600
Job 3194	Gainford Station	$ 201 300
Job 3195	Niton Station	$ 132 300
Job 3196	Edson Station	$ 691 300
Job 3197	Edson-Hinton Loop Reactivation	$ 2 926 800
Job 3198	Hinton Scraper Traps	$ 1 353 900
Job 3199	Jasper Station	$ 227 600
Job 3200	Alberta Station	$ 1 250 400
Job 3201	Blue River By-Pass Relief Facility	$ 90 300
Job 3202	M^{c}Murphy Station	$ 130 400
Job 3203	Darfield Station	$ 130 400
Job 3204	Kamloops Station	$ 3 122 600
Job 3205	Kingsvale Station	$ 10 200 400
Job 3206	Sumas Station	$ 1 820 500
Job 3207	Sumas Tank Farm	$ 4 808 100
Job 3208	Port Kells K1122 By-Pass Relief Facility	$ 91 200
	Total Estimated Cost	**$ 27 445 100**